

Toxic Reduction Plan Summary

Substance

Substance Name and CAS #	Cobalt and CAS # NA-05
Substances for which other plans have been prepared	Formaldehyde, Methanol, Zinc, Hexavalent Chromium, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	key component in catalyst
Reasons for Use	As a manufacturing aid
Reasons for use - summary statement (mandatory)	Cobalt is a key component of process catalysts used at the facility. These catalysts are highly engineered to meet industry standards. Cobalt is also a trace component of the naturally occurring feedstock used in the manufacturing process at the facility.
Reasons for Creation	This substance is not created at the facility
Reasons for creation - summary statement (mandatory)	N/A

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	205
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Joe Lasowski
Position	Environmental Engineer
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	Jlasowski@cfindustries.com
Phone	519-431-1605
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Date of Plan: **November 27, 2017**

Statement of Intent

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the use of cobalt in its operations because it is a key component of the industry standard catalysts required in the manufacturing process and a naturally occurring component of a feedstock. Whenever feasible, we will eliminate, or reduce the discharge of cobalt in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the use of cobalt, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations; and
- we will continue to manage and prevent releases of cobalt through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Cobalt is used as a manufacturing aid required in the production of nitrogen products. Specifically, cobalt is a key component of process catalysts used at the facility. Cobalt is also a trace component of the naturally occurring feedstock used in the manufacturing process at the facility.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the use of cobalt in its operations because it is a key component of the industry standard catalysts required in the manufacturing process and a naturally occurring component of a feedstock. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of cobalt. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- Catalyst manufacturers have provided specific training for operations handling of catalysts.
- The process and equipment are continuously monitored and optimized to maximize catalyst life and prevent catalyst poisoning.


Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for cobalt, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated November 27, 2017.

Certification by Highest Ranking Employee

As of November 27, 2017, I, Amanda Pascavage, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: **Cobalt**



Amanda Pascavage

Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of November 27, 2017, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that are set out in the plan dated November 27, 2017 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: **Cobalt**



Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

LEHDER Environmental Services Limited